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UNITED STATES OF AMERICA
ENVIRONMENTAL PROTECTION AGENCY

PUBLIC COMMENT ON CERTIFICATION OF WASTE ISOLATION
PILOT PROJECT

CARLSBAD, NEW MEXICO
JANUARY 5, 1997
6:00 P.M.

EPA PANEL:	RICHARD WILSON
	LARRY WEINSTOCK
	FRANK MARCINOWSKI
	MARY KRUGER

JANUARY 5, 1997 - CARLSBAD, NEW MEXICO
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1 P R O C E E D I N G S

2 MONDAY, JANUARY 5, 1997, 6:00 P.M.

3 MR. WILSON: Thanks for coming. I'm Dick
4 Wilson from EPA in Washington. I have a little
5 prepared statement to go through with kind of
6 introducing people, talking a little about the format
7 we're going to use tonight, and giving a little
8 background for those of you who aren't as familiar as
9 others are about the background of these hearings.

10 So, again, welcome to the United States
11 Environmental Protection Agency's public hearing to
12 receive comments to our proposed decision to certify
13 that the Department of Energy's Waste Isolation Pilot
14 Plant, or WIPP, is in compliance with the EPA's
15 radioactive waste disposal standards. I'm Richard
16 Wilson, the Acting Assistant Administrator of the EPA'S
17 Office of Air and Radiation. I'm also the presiding
18 officer for today's hearing.

19 Before taking comments, as I mentioned first
20 I want to go through a few procedural items and then
21 talk some about the background, first introducing the
22 other EPA panel members.

23 To my left is Larry Weinstock, Acting
24 Director of the Office of Radiation and Indoor Air,
25 Frank Marcinowski, Acting Director of the Radiation

1 Protection Division.

2 Mary Kruger, on my right, Acting Director of
3 the Center for the Waste Isolation Pilot Plant project.

4 Now a few of the background rules for the
5 hearing.

6 In this public hearing it's an informal
7 hearing. We are not going to swear people in, not
8 going to have cross-examination. Speakers are going to
9 present their statements and may or may not be
10 questioned by members of the hearing panel.

11 We are here to listen to your comments. A
12 court reporter is here to produce a transcript of
13 today's proceedings. If you have a written copy of
14 your statement, we will accept it. When you are
15 called to testify, I'm going to ask all the speakers to
16 identify themselves clearly for the court reporter,
17 spelling their names, and speaking slowly and clearly.
18 And we will holler, or the court reporter will holler
19 if we need to you say it again or speak slower.

20 Individuals are going to be allowed five
21 minutes to testify on their own behalf. People
22 representing an organization will be allowed ten
23 minutes.

24 The purpose of this hearing is to solicit
25 public comment on our proposed decision to certify that

1 the WIPP is in compliance with EPA's radioactive waste
2 disposal standards, and I'd ask people to please
3 confine their comments to that subject.

4 We will be here -- I think we have people
5 scheduled through about 8:20 this evening; we are
6 scheduled to be here to 9:00. And there may be others
7 who come in who hadn't called beforehand, and we will
8 be happy to hear anybody who has comments to make after
9 the people who are already scheduled have a chance to
10 testify.

11 Only those registered in advance are
12 guaranteed a chance to testify, but those who didn't
13 may register at the table outside the door if you
14 didn't do that on the way in, and we will have time
15 tonight to hear anybody who didn't sign up but does
16 have comments to make.

17 We're going to use a timer similar to, I
18 guess, a traffic light. When you begin the statement
19 we'll start the timer. A green light will come on.

20 Is it going to work that way?

21 MR. SMEGAL: Yes. Right up there.

22 MR. WILSON: And when you have three minutes
23 left the light turns yellow. Then the speaker should
24 start their closing remarks. And when the time has
25 elapsed, the light will turn red, and I'll ask you to

1 stop and conclude quickly, even if you have a lot more
2 to go.

3 Out of respect for everybody else's opinions,
4 please abide by the time limits so we get the maximum
5 number of people a chance to be heard.

6 I remind people that we gladly accept written
7 comments today, or at the EPA docket by February 27th
8 of this year, 1998. That means anything you don't get
9 to say today, or anything you want to say in response
10 to what somebody else says may be submitted in writing
11 for our consideration. And we'll read and react to
12 every comment that we get both here in and writing.
13 Please see the information table outside in the hall or
14 refer to the flyer you were handed on the way in for
15 the docket locations and hearing ground rules.

16 The transcript from today's hearing will be
17 available for review in each of the docket locations in
18 about two or three weeks.

19 Finally, let me do a little background about
20 our proposal.

21 In 1992 Congress required the EPA to ensure
22 the safety of the WIPP site. In response, EPA set
23 disposal standards in 1993 requiring DOE to demonstrate
24 that the WIPP would be a safe disposal facility for
25 thousands of years into the future.

1 In February of 1996 EPA followed those
2 general standards with more specific Compliance
3 Criteria related to the WIPP site itself. The
4 Compliance Criteria clarify the requirements of the
5 radioactive waste disposal regulations and require that
6 DOE provide EPA with specific types of information in
7 its Compliance Certification Application.

8 In October of 1996, EPA received DOE's
9 Compliance Certification Application and immediately
10 began its review for completeness and technical
11 adequacy. In November, 1996 we announced that the
12 Application had been received, solicited comments on
13 the application, and announced the Agency's intent to
14 conduct a rulemaking. This began a 120-day public
15 comment period on DOE's application. Public hearings
16 to obtain comments on the application were held in New
17 Mexico in February of 1997.

18 Then in May of this past year, in 1997, we
19 determined that DOE's application was complete, and by
20 law EPA has one year from this date, or until May of
21 1998, to make the final decision on certification.

22 We have consulted with scientific experts and
23 the people of New Mexico prior to issuing a proposed
24 decision. We have reviewed the information on the
25 WIPP's ability to safely contain radioactive waste,

1 and, as required by EPA standards, DOE has had the
2 necessary portions of the application peer reviewed by
3 independent experts.

4 On October 30, 1997, EPA issued a proposed
5 decision that WIPP will comply with the requirements of
6 our Radioactive Waste Disposal Regulations and
7 Compliance Criteria. We are also proposing that DOE
8 meet four conditions for certification. First, that
9 EPA must approve the execution of the waste
10 characterization activities, including determination of
11 the radionuclides and other contents of waste disposal
12 containers currently stored at waste generator sites
13 before the containers are allowed to be transported to
14 WIPP for disposal.

15 EPA must also approve -- the second
16 condition -- the establishment and execution of quality
17 assurance programs for waste characterization
18 activities before the containers are allowed to be
19 transported to WIPP for disposal. Quality assurance
20 programs will confirm that waste characterization is
21 done properly.

22 The third requirements is DOE must submit to
23 EPA prior to closure of WIPP a detailed plan and
24 schedule for implementing passive institutional
25 controls, including an elaborate marker system intended

1 to warn future generations about the hazards of the
2 radioactive waste buried in the WIPP.

3 And the fourth requirement was the DOE seal
4 waste storage panels within WIPP with strong concrete
5 barriers that are engineered to contain hazardous
6 materials.

7 Having proposed our decision, we are here in
8 New Mexico this week to obtain feedback from New Mexico
9 citizens on this proposed decision. As I mentioned
10 earlier, we are also accepting written comments to our
11 proposed decision, and all written comments must be
12 received in our docket by February 27, 1998. Again, I
13 reassure all of you that all written comments and oral
14 comments will be carefully considered before we make
15 our final decision on whether the WIPP complies with
16 EPA regulations.

17 On behalf of EPA I want to thank you for
18 making the effort to come out tonight, and with that
19 we'll begin hearing witnesses.

20 The first signed up is Mike McFadden of DOE.

21 MR. MCFADDEN: I'm Mike McFadden,
22 M-c-F-a-d-d-e-n. I'm with the Department of Energy in
23 the Carlsbad area office. I'm one of the assistant
24 managers.

25 As the first person to speak from Carlsbad,

1 let me welcome you to Carlsbad, New Mexico. I think
2 you would find the people here are very friendly and
3 very interested in your proposed ruling.

4 The EPA's level of involvement and commitment
5 to proposing certification for WIPP has been
6 unprecedented in the annals of federal regulatory
7 oversight. This process you, the EPA, have been
8 conducting for almost three years has been thorough,
9 comprehensive, and performed with the highest degree of
10 professionalism and broadest level of public
11 involvement the DOE has ever witnessed. I would like
12 to use my allotted time to remind you and the audience
13 just how substantial EPA's commitment has been.

14 First of all, the EPA is mandated by Congress
15 to issue general safety and environmental protection
16 standards for disposing of nuclear waste by the Nuclear
17 Waste Policy Act of 1983. EPA did their homework and
18 promulgated 40 CFR 191, a landmark regulatory action
19 which showed the world that containment and isolation
20 of very long-lived nuclear waste could indeed be
21 regulated, and that the protection of human health and
22 the environment could be assured.

23 40 CFR 191 established containment and
24 environmental protection standards for any generic
25 nuclear waste repository. EPA's commitment to ensuring

1 that, specifically, the WIPP repository would meet
2 these standards was established by the Land
3 Withdrawal Act of 1992. Therein, Congress asked the
4 EPA to establish criteria by rulemaking to implement
5 and interpret the general requirements of 40 CFR 191
6 specifically for WIPP.

7 EPA again did its homework, and published,
8 via a thorough public rulemaking process, the criteria
9 for certifying WIPP's compliance with the 40 CFR 191
10 standards. These criteria were laid out in the
11 40 CFR 194 published in February of 1996.

12 The EPA went the extra mile by developing a
13 Compliance Application Guidance Document to provide
14 detailed guidance on the submission of a compliance
15 application. EPA developed this guidance to assist DOE
16 with the preparation of its application and, in turn,
17 to assist EPA's review of the application for
18 completeness, and to enhance readability and
19 accessibility for the application for EPA and public
20 review.

21 Subpart D of 40 CFR 194 establishes a
22 compliance process that goes well beyond the minimal
23 requirements of the Administrative Procedures Act.

24 In the Land Withdrawal Act the Congress
25 insisted that EPA's certification decision be conducted

1 by informal or notice-and-comments rulemaking, which,
2 under the Administrative Procedure Act, only requires a
3 notice of proposed rulemaking, an opportunity for
4 public comments on the proposed rule, and a general
5 statement of the basis and purpose of the final rule.

6 Recognizing the profound importance of its
7 decision, especially the importance to the citizens of
8 the State of New Mexico, EPA compliance process under
9 subpart D of 40 CFR 194 calls for an initial review and
10 public comment period on DOE's application. You
11 allowed 120 days of public comment versus, typically, a
12 60-day period. In addition, a second 120-day public
13 comment period on EPA's proposed ruling is now in
14 progress.

15 As I stated before, this level of public
16 involvement is unprecedented. Not only did EPA allow
17 two extra-long public comment periods instead of a
18 single shorter period, it kept going that extra mile by
19 actively seeking out the public's view by meeting with
20 various stakeholders during the first public comment
21 period on DOE's application. EPA staff didn't just
22 invite stakeholders to Washington D.C. to hear their
23 views, they traveled to New Mexico and set up meetings
24 to inform the themselves of all stakeholder issues
25 without any DOE presence. I understand the EPA has

1 recently held a second round of private stakeholder
2 meetings to elicit the public's concerns over the
3 proposed rule to certify the WIPP.

4 This kind of aggressive seek-out-and-poll
5 regulatory approach is exemplary. By DOE's count, the
6 EPA received over 800 written and oral comments on
7 DOE's application and EPA's completeness determination.

8 Let me now congratulate you on the
9 thoroughness of the EPA's evaluation of the material in
10 the DOE application.

11 DOE believes that our application is the most
12 comprehensive application for regulatory approval that
13 EPA has ever received. With about 24,000 pages of
14 detailed technical material, its review and
15 understanding represents an enormous effort.

16 EPA met that challenge. Over the period from
17 October, 1996, through March, 1997, EPA requested
18 additional information from DOE as it reviewed the
19 application. DOE's responses to these requests were
20 made as quickly as possible as the material became
21 available. About 100 individual requests were made
22 with several thousand pages required for our response.

23 An exemplary adjunct to the EPA's review of
24 the application was their design and conduct of the
25 Performance Assessment Verification Test. The

1 probabilistic Performance Assessment in our application
2 is a complex series of models and computer codes that
3 demonstrate that WIPP will meet the criteria of
4 40 CFR 191 over the regulatory period of 10,000 years.

5 Recognizing the importance of their
6 certification decision, EPA elected to conduct an
7 independent test to stretch the limits of DOE's
8 Performance Assessment by changing parameter values and
9 ranges. Many of these changes were linked to
10 suggestions resulting from public review of our
11 application. EPA's Performance Assessment Verification
12 Test moved the compliance curves but still demonstrated
13 compliance with the 40 CFR 191 criteria with a
14 substantial safety margin.

15 EPA's elective decision to undertake such a
16 complex independent evaluation is testimony to their
17 commitment to ensure the certification is made
18 correctly and defensibly.

19 Based on all the above, EPA proposed to
20 certify WIPP and enter a second 120-day public comment
21 period on the proposed rule. EPA developed a
22 comprehensive Compliance Application Review Document,
23 called CARD, for each and every section of 40 CFR 194.
24 Each CARD details the logic and information EPA used
25 to evaluate WIPP's compliance with that section. In

1 addition, EPA developed technical support documents for
2 each CARD which presents the details and back-up
3 calculations of EPA's analysis. All this material was
4 developed before the proposed rule was announced and
5 was placed on the docket sso the public could review
6 the entire basis of EPA's proposal during the entire
7 120-day comment period. This dedication to keeping the
8 public informed is commendable.

9 In addition, EPA has taken other measures to
10 assure that the public is involved in the rulemaking.
11 EPA allowed the New Mexico Environment Department, the
12 Environment Evaluation Group, and the New Mexico
13 Attorney General's Office to observe meetings between
14 EPA and DOE staff to discuss technical issues during
15 the pre-proposal period. EPA has summarized all
16 meetings between EPA and DOE and placed them in the
17 public docket. While these actions are not required,
18 EPA believed that they could be useful to the public.

19 In summary, I commend EPA on its thoroughness
20 and the professionalism with which it has conducted its
21 evaluation of our application. The record is clear:
22 EPA's proposed decision to certify WIPP has been based
23 on the most comprehensive regulatory effort DOE has yet
24 seen on the part the Agency. It has been conducted in
25 an atmosphere of extraordinary visibility, and the

1 public has been given every possible opportunity to
2 influence the results every step of the way.

3 Thank you very much.

4 MR. WILSON: Thank you very much for coming.
5 We're having problems with our timer, I guess. Not that
6 the speaker took too much time, but we haven't gotten
7 the lights to work.

8 The next person to sign in is Benny Hooda.

9 MR. HOODA: I don't have a prepared
10 statement, so I'm just going to talk offhand.

11 My name is Benny Hooda, and I work for
12 Westinghouse-WIPP, and the Environmental Monitoring
13 Program. We monitor the environment for air, water,
14 soil, and any other thing that might be dispersed into
15 the environment. Basically, we comply with DOE 10 CFR
16 834 and EPA 40 CFR 61, subpart H.

17 That's basically effluent hazards that might
18 be associated with the environment.

19 The other part that is -- we have been doing
20 the baseline study, I guess since '82, and we have the
21 data available, which we publish in the annual Site
22 Environmental Report. That is -- if the public wants
23 to view those data, that is available in the library,
24 as well as we can put you on our mailing list and you
25 can review that data to scrutinize, or look for

1 information.

2 Basically, I just want to affirm that we have
3 a very good program in monitoring the environment, and
4 we comply with the 100 millirem limit for the public,
5 and if there is -- even 1,000 percent closer to that
6 limit, we take administrative, as well as ecological
7 action; that is, we do our best to develop the best
8 available technology on the screening for the
9 radionuclides.

10 That's all I have. Thank you.

11 MR. WILSON: Okay. Thank you very much for
12 coming and for your statement.

13 Next, Mayor Gary Perkowski.

14 Mayor, we want to thank you and all the
15 citizens for this nice place have the hearing, and for
16 your hospitality.

17 MAYOR PERKOWSKI: We want to welcome you to
18 Carlsbad. Thank you very much for being here. We have
19 had a good had relationship with the EPA over the
20 years. We have worked very closely with them, and we
21 think it's been a very good process, and thank you.

22 My name is Perkowski, P-e-r-k-o-w-s-k-i,
23 Gary, and I'm the mayor of the City of Carlsbad.

24 First of all, again I'd just like to thank
25 the EPA for all the work they have done.

1 As I say, Mr. Weinstock, myself, and some of
2 the others members of the EPA have worked very closely
3 to ensure the safety of this project for the citizens
4 of this community. We have worked closely with both
5 the EPA and with DOE to make sure it is.

6 My No. 1 concern, and the major concern of
7 the City Council, is to make sure this is a safe
8 project. We want to do anything we can to ensure that
9 safety, and protect our citizens. And we think that
10 has happened.

11 We have been the host community for the last
12 25 to 30 years, and we are proud to be at the forefront
13 of the efforts to safeguard the citizens of this
14 country from the hazard of the transuranic waste. We
15 are proud we are the community that was willing to take
16 the first critical step that will lead to the solving
17 of our nation's nuclear waste problem.

18 Twenty five years ago one of my predecessors
19 or the other representatives of the City of Carlsbad
20 had invited federal officials to Carlsbad to look at
21 and discuss the possibility of locating the nuclear
22 waste repository in the salt beds that surround the
23 City. That as after the site in Kansas was turned down
24 for various reasons.

25 We have been through the business of working

1 through the salt in potash mining for many, many years,
2 and the people in this community were very well aware
3 of the qualities that were displayed in salts and the
4 things that could be done with salts, and what was
5 possible at that time.

6 Since that first invitation, we have
7 supported this project and feel strongly that WIPP can
8 safely isolate the transuranic waste forever, much less
9 meet the 10,000 years as required by EPA. We think it
10 is a very good project and the waste can be totally
11 isolated and safe for the citizens of the country much
12 better than the way we are storing it at the present
13 time, which is temporary and in concrete pads, et
14 cetera, at various sites around the country.

15 The project has been ready to open for the
16 last seven years and has been engineered and studied by
17 some of the best scientific minds in our country and
18 the world. We feel the allegation with most of those
19 people is it is a very safe project and is ready to
20 start accepting the wastes from around the country.
21 It's time to stop wasting the taxpayers' money on these
22 trivial details and further scrutiny. It is time to
23 open the WIPP and use it for its intended purpose.

24 As mayor of this community, I would again
25 like to congratulate EPA for the review of the project.

1 It is vitally important to the citizens of this
2 community that the WIPP be safe, not only the project
3 but the transportation and other things, and we feel
4 all of those meet the criteria, are very safe, and we
5 are willing to take it in our community.

6 We were pleased by EPA's announcement this
7 past October that the agency proposed to certify the
8 WIPP's compliance with the long-term disposal
9 standards for transuranic waste. It is strongly urged
10 that any unnecessary redundant requirements are removed
11 and EPA issue the final certification for the WIPP as
12 soon as possible.

13 The project is ready, the community is ready,
14 and the nation desperately needs the project to open.
15 Carlsbad is ready to fulfill its commitment to the rest
16 of this country and help to protect future generations
17 from the nuclear storage of transuranic waste.

18 We think the project is ready to open. Thank
19 you very much for your time. Welcome to Carlsbad.

20 MR. WILSON: Thank you, Mayor. As you
21 probably know, our schedule is to have a final decision
22 on this matter from EPA'S standpoint by May. So we are
23 moving promptly.

24 MAYOR PEROWSKI: We appreciate that, and we
25 appreciate how prompt you have been with the amount of

1 work you have had to do to get through all the
2 documents presented.

3 MR. WILSON: And thank you and the community
4 for your help.

5 MAYOR PEROWSKI: If we can help you in any
6 way while you are here, let us know.

7 MR. WILSON: Thank you.

8 Next I have Representative John Heaton.

9 (Note: No response.)

10 Next I have Tracy Hill.

11 MS. HILL: Good evening.

12 You have to pardon me. I came down with a
13 sinus infection, so I brought my water bottle just in
14 case.

15 I appreciate the opportunity to stand before
16 you tonight to offer my views on the U. S.
17 Environmental Protection Agency's --

18 (Note: Reporter interruption.)

19 MS. HILL: I appreciate the opportunity to
20 offer my views on the U. S. Environmental Protection
21 Agency's Proposed Certification decision for the Waste
22 Isolation Pilot Plant. I am representing the Chamber
23 of Commerce as its Executive Director.

24 As a newcomer to Carlsbad, I am very
25 impressed with the Waste Isolation Pilot Plant and its

1 mission to safely and permanently dispose of
2 radioactive transuranic waste.

3 The Carlsbad Chamber of Commerce is pleased
4 by the Environmental protection Agency's proposal to
5 certify the WIPP's compliance with the long-term
6 disposal standards of radioactive waste.

7 The WIPP is a well-thought-out solution that
8 has evolved over the past 22 years with a foundation of
9 top scientific and engineering minds and national
10 research organizations. Independent groups and the
11 public have scrutinized the project from all angles.
12 The WIPP is a carefully, deliberately designed,
13 developed and implemented facility, closely audited by
14 domestic and international experts the in nuclear
15 waste and mining technology.

16 Some 25 years ago the representatives of the
17 City of Carlsbad invited federal officials to visit
18 Eddy County and discuss the possibility of locating a
19 nuclear waste repository in the saltbeds that lie to
20 the east of the city. Over the years, the people of
21 Carlsbad have come to know the Department of Energy as
22 an agency committed to the safe, environmentally
23 responsible operation of the WIPP.

24 As the host community for this project,
25 Carlsbad wishes to stand up and be counted as the city

1 that took the first critical step towards solving the
2 nation's nuclear waste problem. The WIPP, the
3 Department of Energy, and Westinghouse are good
4 neighbors. I, along with the Chamber and the 425-plus
5 Chamber businesses and individuals who are associated
6 with the Chamber, urge the EPA to issue a final
7 certification decision as soon as possible. With final
8 EPA certification the WIPP can start doing what it is
9 so very capable of doing: Protecting our nation's
10 people and the environment from transuranic waste, and
11 eliminating the risks associated with this waste
12 sitting in temporary storage.

13 This is an important time for Carlsbad and
14 the citizens of this nation. Thanks to the EPA's
15 preliminary proposed rule, which represents its
16 decision to certify the WIPP, we have within our grasp
17 a solution to an environmental problem that affects
18 more than 50 million Americans. It has taken more than
19 two decades of world-class science to get to this
20 point. No other public project in recent history has
21 been studied like the WIPP has. The facility is
22 scientifically and technically sound. It meets all
23 applicable federal nuclear waste disposal standards.
24 We cannot afford to delay any longer. The time to deal
25 with the transuranic waste problem is now.

1 In closing, I strongly urge the EPA to remove
2 unnecessary, redundant requirements and issue final
3 compliance certification for the WIPP.

4 One possible example of redundancy in the
5 requirements might be Conditions 2 and 3 of the EPA's
6 proposed decision to certify the WIPP. The DOE's
7 processes and requirements for certifying each waste
8 generating site are quite stringent. Adding additional
9 oversight, rulemaking and public comment periods to the
10 rulemaking process will do nothing to improve the
11 protection of human health and the environment.

12 Thank you.

13 MR. WILSON: Thank you.

14 Next I have Senator Carroll Leavell.

15 (Note: No response.)

16 I understand Representative John Heaton --

17 REPRESENTATIVE HEATON: Perfect timing.

18 MR. WILSON: Welcome.

19 REPRESENTATIVE HEATON: Thank you.

20 You must be ahead of schedule.

21 MR. WILSON: We are a little ahead of
22 schedule.

23 REPRESENTATIVE HEATON: Okay. My name is
24 John Heaton. I'm State representative for District 55.
25 WIPP is in my district, and that district is comprised

1 of 23,000 people that I represent in the district.

2 When I look back on this occasion, in
3 thinking that it might be, hopefully, the last time we
4 testify in a hearing before EPA, I sort of become
5 nostalgic after some 22 years of doing this. I don't
6 know how many times we have done it, maybe 70 or 80
7 altogether, but a lot of hearings through that period
8 of time.

9 When I look back, also I think of a trip
10 maybe four years ago when we visited with EPA, and I
11 think we tried to -- when we went to Washington, we
12 tried to visit with EPA each time we went to try to get
13 their perspective on where things were, the community
14 primarily being very interested in safety factors and
15 those issues associated with WIPP. But I think that
16 might have been one of the most important visits that
17 we made, in that I think that DOE at that time was off
18 on their tangent and EPA was going on their tangent,
19 and it was helpful, I believe, for us to hear both
20 perspectives and go to both parties and say, "You need
21 to come to the table."

22 And I think that that was perhaps one of the
23 most important meetings that we attended, and
24 subsequently it became codified in the amendment to the
25 Land Withdrawal Act.

1 But I have sat through almost all of the
2 scientific presentations that were made publicly when
3 they had the systems privatization process going on,
4 sat through most of those hearings, and I think that
5 have learned a good deal about it, and I think that we
6 have -- that with as long as we have mined potash in
7 this basin, which is basically in that zone, for some
8 55 years now, I think we have a very good understanding
9 of it.

10 I think the science is very clear, I think
11 that the National Academy's endorsement of the project
12 is very clear. I think that those people that I
13 represent I believe support this project very, very
14 strongly, and I think it's time to certify the project
15 and certify WIPP, and I encourage you to do so at the
16 earliest point.

17 Thank you very much.

18 MR. WILSON: Thank you very much for coming.
19 Sorry to get you as soon as you walked in the door.

20 REPRESENTATIVE HEATON: That's quite all
21 right. It happens frequently.

22 MR. WILSON: You're well experienced, then.

23 Has Senator Leavell come yet?

24 Okay.

25 Next I had Mike Brown. Is he here?

1 (Note: No response.)

2 Chris Pflum, if I pronounced that right.

3 Did I mess up the pronunciation?

4 MR. PFLUM: It's pretty good. Most people
5 don't get it.

6 A half hour. Away ahead of schedule here.

7 I'm wearing my Santa Fe jacket. I guarantee
8 you won't see anybody in Santa Fe wearing a Carlsbad
9 jacket when you go up there.

10 MR. WILSON: Maybe we can get somebody to
11 come up.

12 MR. PFLUM: My name is Chris Pflum. I live
13 in Carlsbad, New Mexico, and I speak on behalf of
14 myself and my employer Roy F. Weston, Incorporated.

15 Weston employs more than 2,800 staff,
16 representing diversified disciplines in environmental
17 fields. Here in Carlsbad we provide technical and
18 management support services to the U. S. Department of
19 Energy Carlsbad Area Office.

20 I commend the EPA for its thorough review of
21 the DOE application for the certification of the Waste
22 Isolation Pilot Plant. Anyone who accuses the EPA of
23 blindly endorsing the WIPP has not taken the time to
24 read EPA's proposed rule and supplementary reviews.
25 Besides accurately and succinctly translating complex

1 information into plain English, you communicated your
2 review in a way that leaves no doubt as to where you
3 stand on the WIPP project. Such frankness is a
4 refreshing relief from the circumlocution that often
5 plagues regulatory agencies.

6 Of course, I'm not speaking about EPA at all
7 when I say that.

8 MR. WILSON: I can tell.

9 MR. PFLUM: Hardly a blind endorsement, the
10 EPA's rules and analysis clearly demonstrate that you
11 have read and understand each of the 24,000 pages that
12 compose the application and its appendices. I also
13 commend the EPA for its decisiveness.

14 With the WIPP'S period of performance set at
15 10,000 years, anyone can dream up scenarios that would
16 cause WIPP to fail. The most popular scenario,
17 inadvertent human intrusion, has inspired the
18 imagination of many WIPP opponents. Some claim that
19 humans would inject brine into a borehole, the borehole
20 casing would fail, the brine would then find its way
21 into the repository, it would dissolve the waste, and
22 then find it's way back out again.

23 Page 2.

24 More recently, the same opponents argued that
25 someone would drill into WIPP using air, rather than

1 fluid, and thereby create releases that are,
2 supposedly, much larger than what was modeled in the
3 Compliance Application.

4 Although the EPA has courageously confronted
5 these doomsayers, I guarantee that you will hear more
6 from them. The desperate opponents of the WIPP are
7 like drowning men grasping at straws. They are driven
8 to concoct even more preposterous ways for people to
9 inadvertently exhume waste that is buried some 2,100
10 feet below the earth's surface.

11 I urge you not to take these fairy tales too
12 seriously. Heed the words of the National Academy of
13 Sciences who stated, and I quote: We consider that it
14 is not possible to assess the probability of human
15 intrusion into a repository over the long term, and we
16 do not believe that it is scientifically justified to
17 incorporate alternative scenarios of human intrusion
18 into a risk-based compliance assessment.

19 The alternatives they were speaking of are
20 alternatives to what already appear in 191.

21 That's the -- Let's be honest. Could you
22 jimagine any EPA administrator refusing to certify the
23 WIPP because some person thousands of years from now
24 could inadvertently exhume more waste than the
25 regulations allow?

1 Finally, I commend the EPA for giving the
2 public so many opportunities to comment on the WIPP.
3 Clearly, the EPA seeks and wants to accommodate the
4 will of the people. By the same measure, the EPA
5 should obey our elected officials, who speak for the
6 people. In the Land Withdrawal Act Congress clearly
7 expresses the public's desire for EPA to expeditiously
8 certify the WIPP as a disposal site for as much as 6.2
9 million cubic feet of transuranic wastes. The EPA now
10 proposes to certify each of some 570 waste streams that
11 are destined for disposal and introduce a 30-day
12 comment period prior to the certification of each
13 stream. If we optimistically assume that a
14 certification rule can be completed in three months,
15 which would be a record for any regulatory agency, it
16 would take the EPA 142 and 1/2 years to certify all the
17 waste streams. Even if EPA could simultaneously
18 certify 10 waste streams at a time, the process would
19 take more than 14 years.

20 I cannot find a passage in the Land
21 Withdrawal Act that gives the EPA authority over the 21
22 sites to generate transuranic radioactive waste.
23 Perhaps EPA cannot find it, either, otherwise you would
24 have have credited Congress rather than an obscure
25 provision in your own regulation as a source of your

1 authority over waste streams and waste sites.

2 The DOE has adequately regulated itself in
3 this area, and Congress has never indicated that EPA
4 could do a better job. I, therefore, recommend that
5 you not create any more certification hurdles that
6 would protract the disposal of transuranic radioactive
7 waste. Rather, practice what you preach in the opening
8 pages of your proposed rule. There you say: The EPA
9 is committed to the intent of the Congress clearly
10 expressed in the Land Withdrawal Act.

11 Thank you for the opportunity to speak.

12 MR. WILSON: Thank you very much for coming.

13 If you want to join us in Santa Fe and wear
14 your Carlsbad jacket, we will break the rule of only
15 being allowed to testify once.

16 MR. LEAVELL: State Senator Carroll Leavell.

17 I understand you --

18 MR. WILSON: Yes, Senator. Please come
19 forward.

20 SENATOR LEAVELL: Thank you very much. I
21 appreciate the opportunity to testify here this
22 evening.

23 I'm State Senator Carroll Leavell, and I
24 serve State Senate District 41. State Senate District
25 41 consists of the south half of Eddy County and the

1 south half of Lea County. It includes the south half
2 of Carlsbad, Loving, and down the Pecos Valley, the
3 south half of Hobbs, and Eunice. The WIPP site lies in
4 the center of this senate district that I represent.
5 My home is in Jal, which is approximately 42 miles
6 southeast of the WIPP site.

7 I also serve on the Radioactive and Hazardous
8 Materials Interim Legislative Committee. And I might
9 say that on that committee we have had approximately
10 six meetings, and always at every meeting had some
11 testimony and discussion of the Waste Isolation Pilot
12 Project.

13 I have followed the Waste Isolation Pilot
14 Project from its initial conception to development and
15 through the previous Environmental Impact Statements.

16 I might add that I was reared in Southeast
17 New Mexico and have lived here most of my life, and
18 watched the development of this prooject. I continue
19 to support the continued phased development of WIPP to
20 receive transuranic waste from the Department of Energy
21 facilities in 1998.

22 While i was elected by the citizens of
23 District 41, I am concerned for all the citizens of New
24 Mexico. My greatest concern is for the waste held in
25 temporary storage, such as in Los Alamos, New Mexico. I

1 had the opportunity early this year to spend a day at
2 that facility and look at their current storage and how
3 everything is being held at that point. The
4 transuranic waste has been developed and simply will
5 not go away. It is not acceptable to leave the
6 transuranic waste in temporary storage rather than
7 transporting it to the WIPP for permanent storage.

8 The long-term solution is necessary and
9 available. The no-action alternative has been too high
10 a risk to the health of our people and the cost to the
11 taxpayers.

12 There are approximately 53 million people
13 within a 50-mile radius of the 24 sites around the
14 country where the transuranic waste is stored. This is
15 simply not an acceptable risk. The total WIPP project
16 has been well thought out.

17 I support the transporting of transuranic
18 waste by truck. It has been well tested and proven to
19 be safe. The TRUpac II containers are proven strong
20 and safe during extensive testing programs. The trip
21 plans required are more stringent than any required by
22 any other trucking operation. The State has worked
23 together to design the shipping routes of the WIPP.
24 The trucks are monitored and in constant communication
25 along the route.

1 Again, the planning and safety requirements
2 exceed anything in the trucking industry.

3 During the past fall the Radioactive and
4 Hazardous Materials Legislative Committee heard
5 testimony from the results of the survey that was
6 funded by the University of New Mexico. This has been
7 an ongoing survey that started some years ago to test
8 the support for the Waste Isolation Project throughout
9 New Mexico. It was interesting that the strongest
10 support for the project comes from Eddy County and from
11 Los Alamos County.

12 Los Alamos County was certainly
13 understandable. They have barrels of transuranic waste
14 stored in trenches and above the ground in buildings.
15 A spill or leak can cause health injury to the local
16 population, and it also exposes persons below,
17 throughout the Rio Grande Valley, should the
18 transuranic waste reach the water table, to affect the
19 entire Rio Grande Valley. This would include the
20 populations of Santa Fe, Albuquerque, Belen, Los Cruces
21 and El Paso.

22 Again, interesting that the closer to Eddy
23 County the stronger the support. I can only assume that
24 the local population has taken the time and the
25 interest to investigate and understand the Waste

1 Isolation Pilot Project.

2 In this area you truly have a reverse of the
3 "not in my back yard" syndrome.

4 I might add that the strongest opposition to
5 the project came from the northeast part of the state,
6 and I found it interesting that would be the Santa Fe
7 to Raton corridor. And as such I can only assume that
8 the concern is with the transportation. Some argue
9 that it's better to leave the transuranic waste in
10 temporary storage, rather than transporting it to the
11 WIPP site for permanent disposal. These
12 recommendations are not acceptable because they
13 provide a short-term storage solution. Eventually, a
14 long-term solution is necessary. It probably will be a
15 greater -- it will probably be at a greater cost to
16 taxpayers and at a greater health risk. Additionally,
17 it would have the greatest long-term health impacts to
18 store on a temporary basis. It would have a potential
19 of 2235 deaths over 10,000 years as predicted.

20 This, again, is simply unacceptable and an
21 unnecessary risk.

22 Some argue that there's no way to predict or
23 prevent human intrusion into the repository area, which
24 would bring radioactivity into the human environment.
25 The Performance Assessment done for the Second

1 Supplemental Environmental Impact Statement clearly
2 shows there were no releases to the environment under
3 any of the scenarios considered except for waste
4 brought to the surface by multiple drilling.

5 Even those amounts of waste material do not
6 exceed the radioactivity limits of EPA regulations. In
7 all considerations the WIPP is technically safe and
8 cannot affect our health adversely.

9 The Waste Isolation Pilot Project near
10 Carlsbad was selected for many good reasons. Deep
11 geologic disposal for isolating nuclear waste is based
12 on the large body of U. S. and international research.
13 Let's put this research knowledge to good use
14 and not waste it. The Waste Isolation Pilot Project
15 repository, almost a half mile underground, is carved
16 out of a 225-million-year-old bedded salt formation.
17 These salt beds are found only in geologic regions that
18 lack significant flows of ground water, thus reducing
19 the possibility that waste could be carried out of the
20 repository by natural process.

21 Additionally, salt tends to heal itself when
22 mined. After several hundred years the salt bed is
23 expected to close upon the waste and permanently lock
24 it deep below the surface.

25 The repository, personnel, transport,

1 emergency programs are all in place for safe disposal
2 of the transuranic wastes at the WIPP. I ask you to
3 act favorably.

4 I appreciate the opportunity to be with you,
5 and thank you for the opportunity to give my testimony.

6 MR. WILSON: Thank you, Senator, for coming.
7 Mike Brown.

8 MR. BROWN: Hello. I'm Mike Brown, and I've
9 worked on various aspects of the WIPP project for the
10 last 13 years. Over that period of time I've seen the
11 life cycle cost of the WIPP project add another billion
12 dollars to that life cycle cost with no added safety or
13 no reduced risk to the public or anything.

14 What I'd like to do is thank the EPA for
15 putting out their draft rulemaking and finally
16 recognizing that we're close and have met all the
17 requirements and have exceeded a lot of the
18 requirements that the law established, but one of the
19 conditions, Condition 3, is one of those things that's
20 going to add to the cost of the project without adding
21 any value to the project; and that is, the condition
22 that requires a 30-day public comment period after the
23 audits of the site, and when we're getting ready to
24 certify the assignment to ship waste or added waste
25 streams.

1 EPA and DOE have the technical expertise, and
2 the EPA, through the draft rulemaking, accepted the
3 standards that DOE had worked with EPA and various NMED
4 and EEG to establish. And when they accepted those
5 standards, they have that expertise in-house to ensure
6 that we meet those standards, and the addition of a
7 public comment period will not do anything to add value
8 to the thing, it will just add a lot of cost and delay.

9 And time is money.

10 The next thing I'd like to say is that as a
11 citizen in New Mexico -- as you go through these
12 hearings, you are going to hear a lot of people or
13 different groups say they represent the citizens of New
14 Mexico. I am a citizen of New Mexico, and I'm here to
15 say that they don't represent me, necessarily, and so
16 take that into consideration when they speak.

17 The next thing is I'd like to address some of
18 the hazards of the plutonium, because a lot of our
19 detractors and opponents have said, "Well, plutonium is
20 one of the most hazardous substances known to man," and
21 all kinds of things. And with that, I'd like to say
22 that over the past 50 years, 17,000 workers have dealt
23 with plutonium and handled it and worked in the
24 different facilities where this plutonium was
25 generated, and none of the deaths of those people have

1 been associated with plutonium-related deaths.

2 And so that's part of it.

3 Most of the hazards come from inhalation,
4 contamination to open wounds, or ingesting it, and when
5 it comes in sealed, certified containers, that part of
6 it is not going to be a hazard to us, and we can
7 control that, and we've worked with it.

8 You have all dealt with many other numerous
9 safety hazards and toxic chemicals. Alcohol has -- and
10 stuff. We all know people that have died in
11 alcohol-related deaths, drug-related deaths. We
12 haven't killed anyone related to plutonium-related
13 deaths.

14 So I think we can handle it safely.

15 I would just like to reemphasize that the
16 drums coming to WIPP will hold anywhere from the
17 average of 8 to 16 grams of plutonium. That is about a
18 chiclet size through a 55-gallon drum. It is not like
19 finding -- like a lot of other people that are pointing
20 out different things about WIPP have said. It's
21 distributed on different materials and stuff, and it's
22 not easily removed from that material, so that's why
23 they have scrapped this material and called it waste,
24 and would like to send it to WIPP.

25 The last point I would like to make is that

1 this is a problem that many people hope will get better
2 by just leaving it and not doing anything. WIPP is a
3 movement towards the solution. If opening WIPP is a
4 movement in that direction, then we need to go ahead
5 and move forward, because the longer we wait and the
6 longer we delay and the longer we keep adding to all
7 the reports and studies are not going to make this
8 problem go away. It will continue to fester, and when
9 it finally erupts, it will be more costly and more
10 hazardous to everybody, workers and public, to resolve.

11 So I just want to reemphasize that it's time
12 to act and continue on, and I'd like to see the
13 rulemaking go through and continue.

14 Thank you.

15 MR. WILSON: Okay. Thank you very much for
16 taking the time to come tonight.

17 The next scheduled witness is Paul Robinson.

18 Is he here?

19 MR. ROBINSON: Thank you. I'm Paul Robinson,
20 president of the Sandia National Laboratory, and it is
21 a great pleasure for me to appear on behalf of Sandia
22 and on behalf of all the men and women who have worked
23 on this project for so long.

24 In 1975 Sandia was asked by the then Atomic
25 Energy Commission to assume the scientific

1 responsibility over what became the Waste Isolation
2 Pilot Plant. We believed this mission was an important
3 one and agreed to the role, first because it was very
4 consistent with Sandia's mission to try and perform
5 exceptional service in the national interest. It
6 clearly is the necessary first step in addressing a
7 major problem in resolving the legacy of nuclear
8 weapons development; namely, the transuranic waste
9 disposal. We had been a major player in weapons
10 development and had the talent to assist in the waste
11 disposal, particularly the areas of expertise of the
12 geotechnical skills, high consequence analyses, and
13 risk assessment methodologies which we had pioneered in
14 the early days, and we have been employed in the
15 Application you have seen.

16 Our involvement since 1975 has included,
17 first, site characterization, conceptual design,
18 scientific experiments, and the Performance Assessment
19 work.

20 The project has, in fact, been one of the
21 longest, continuous projects in the history of the
22 Sandia Laboratories, and our laboratory was established
23 during the Manhattan Project of World War II. We have
24 been involved for over 22 years, and the price tag for
25 the work we have done in support of this repository has

1 been \$475 million over that time, with the peak being
2 \$53 million in a single year with 134 full-time people
3 employed in the work.

4 I think it's fair to say that this site has
5 received more intense scrutiny and scientific study for
6 a longer period of time than any other comparable
7 activity in the history of our country.

8 We have worked closely with the folks here in
9 Carlsbad and with the community and with the state, and
10 I would like to say on behalf of Sandia we have
11 appreciated the open minds with which the people have
12 considered our work both locally, and now, at this
13 stage, nationally.

14 All of the work has now come to fruition in
15 the compliance certification issues each of you are
16 addressing here today.

17 A number of folks have devoted their entire
18 careers to this work. You are probably familiar with
19 Wendell Weart, who has been one of the folks touring
20 the site, who has spent his second scientific career on
21 this work.

22 The repository has a dimension of 16 miles
23 within -- 16 square miles, with a waste area of 200
24 acres about a half a mile underground, an operational
25 lifetime of 35 years, and calculations which have

1 filled some of our largest computers and have employed
2 more skills, technical skills than any other comparable
3 project, with people trying to analyze from every
4 possible direction the questions which came forward.

5 The site was selected in December of 1975;
6 the characterization report and the conceptual design
7 report completed in '78. The first Environmental
8 Impact Statement was done in 1980, which then was a
9 Sandia responsibility, the first half in 1981.

10 Extensive in situ studies were carried on
11 from '83 through 1995, when they were completed.

12 We were assigned the Performance Assessment
13 role in 1985, and the result is the EPA preliminary
14 rule on the WIPP certification in October of last year.

15 No doubt we all recognize the controversial
16 nature of the issues, and we've tried to adopt, as a
17 laboratory, a policy of openness. I think we have set
18 new standards for ourselves, and I hope they will be
19 useful for other similar projects in the future with
20 the level of information which has been provided. CD
21 Roms were made available with all the analyses in which
22 we said to the community and anyone interested: Here
23 are all the analyses we believe that supports this
24 certification. If there's anything you feel we have
25 not done, please, we would like your input.

1 That information has been made available now
2 through the World Wide Web.

3 We've also characterized the work with
4 thorough scientific reviews. The National Academy of
5 Science review is a hallmark for us of the technical
6 excellence that is involved in the work.

7 We have also carried out a number of
8 international peer reviews and a review by an
9 environmental evaluation group, the EEG. And over this
10 22-year history there have been lots and lots of
11 Scientific Journal publications and peer review
12 journals.

13 EPA, of course, has the ultimate review of
14 the adequacy and the soundness of the work in
15 demonstrating the long-term safety of the repository.
16 Our review of the work done has convinced us that you
17 do have a very thorough understanding of the issues
18 that are involved, and we think you have addressed
19 those issues in a very conservative fashion, as is
20 appropriate for the task you've been assigned.

21 I think the analysis, along with our
22 analysis, showed that WIPP complies with the standards
23 with a large margin of safety, which is appropriate
24 for such a project. Sandia believes that WIPP will be
25 a safe repository for the long-term isolation of

1 radioactive waste.

2 Our studies show the the repository is so
3 robust that it will comply even with the stringent
4 regulations, even in the unlikely event of the
5 human-intrusion scenarios. This clear assurance of
6 compliance I think means we have successfully completed
7 the investigatory phase and it's now time to move
8 forward to certify the WIPP and to operate it for its
9 intended purpose.

10 On behalf of Sandia, I'd like to strongly
11 recommend that EPA certifies WIPP as provided in the
12 draft rule.

13 Thank you very much.

14 MR. WILSON: Thank you, Mr. Robinson, for
15 coming, and all the good work by you and your very
16 accomplished staff.

17 MR. ROBINSON: Okay. Thanks.

18 MR. WILSON: I'm going to have one more.

19 Is Paul Sanchez here? Paul Sanchez.

20 (Note: No response.)

21 If not, we are a little ahead of schedule.

22 I'm going to take a break at this point.

23 (Note: A discussion was held off the record.)

24 MR. WILSON: We have a couple of people who
25 signed up that I thought we would try and fit in now,

1 if we could, before we take the break.

2 Mr. Loftus?

3 MR. LOFTUS: Welcome.

4 My names is Charles M. Loftus, and I seem to
5 be the first person to speak against the WIPP.

6 I have no objection to the underground or on
7 the road. My problem is with the building. They spent
8 ten years on the underground and transportation, but
9 they haven't done anything with the problems that I
10 wrote to the first Secretary of Energy eleven years
11 ago, which were in the plans of the building.

12 They never put concrete walls on the exterior
13 south side of the building. It's still the metal
14 siding.

15 We were out there in July of this year, and
16 the person said, "Well, what are you worried about?
17 It's the same metal siding used on all commercial
18 buildings."

19 This is not a commercial building, it's a
20 waste handling plant. It requires concrete walls on
21 the outside the same as it has on the inside. It has
22 six- and eight-foot concrete walls on the inside.
23 Outside is metal.

24 The man says, "Well, if we put a hole in it,
25 we will just shut down the whole operation until these

1 repairs are made."

2 That is Rocky Flats.

3 We are talking about opening something that
4 is not ready.

5 The other thing was the WIPP was designed to
6 handle all barrels, leaky ones, corroded barrels, and
7 the good barrels. WIPP themselves has said: No leaky
8 barrels will come on the site. We'll send them back.

9 The reason for that is they told us again on
10 the 31st of July they would not be ready to handle that
11 type of material until the year 2006 or 2008, because
12 the section of the building that handles that has the
13 same problems that were in the design eleven years ago.

14 The way I look at it, the site is not ready
15 to open. You can't bring material into the building to
16 unload it. They have to unload it out in the yard with
17 fork lift trucks, bring it in the so-called air locks
18 and into the building.

19 The design was, and it has been wrong since
20 Day One, and they know it.

21 The air locks were built 90 degrees from the
22 building. There's no way to back your trucks into that
23 110-foot, you know, long air lock to get in the
24 building.

25 From Day One we told them concrete walls,

1 concrete air locks parallel with the building, drive
2 your truck in, open your doors, unload safely into the
3 building. They have opted to do none of this.

4 So the conditions that I wrote to the Admiral
5 eleven years ago -- He flew in here to town and fired
6 everybody that was supervisor out there, because they
7 told him they were ready to open.

8 I take responsibility partly for being
9 delayed for ten years, and I'm still fighting it,
10 because I consider until they put the concrete walls up
11 and do what's needed to bring these leaky barrels,
12 which for the last five years everybody has said the
13 barrels are leaking, they got to go underground. They
14 can't handle them. They won't handle them until the
15 year 2006.

16 So why open a site that all you can bring in
17 here is good barrels that aren't leaking and aren't
18 corroded. Leave them where they are at. The ones to
19 worry about are the leaking barrels and the corroded
20 barrels. They can't handle them till 2006.

21 So let's go ahead and do what's needed out
22 there: Put up your concrete walls, get the site ready,
23 and when you open it, you can handle everything that's
24 needed to put underground.

25 Thank you very much.

1 MR. WILSON: Well, thank you for taking the
2 time to come.

3 I noticed you have -- Do you have some
4 materials?

5 MR. LOFTUS: That is what I did at the last
6 EPA, just tells who I am and all about what happened in
7 the last ten years.

8 MR. WILSON: If you would like to give it to
9 us, or if you would like to send it in.

10 MR. LOFTUS: I will give it to her.

11 MR. WILSON: Okay. Thank you very much.

12 MR. LOFTUS: Okay.

13 MR. WILSON: Is Mr. Chuck Williams here?
14 Chuck Williams.

15 (Note: No response.)

16 MR. WILSON: Did Paul Sanchez come? Did Paul
17 Sanchez come?

18 (Note: No response.)

19 MR. WILSON: Bruce Baker?

20 MR. BAKER: My name is Bruce Baker. I work
21 for Technadyne Engineering Consultants. For ten years
22 I've worked for -- as a consultant to Sandia National
23 Laboratories Performance Assessment Group. I'm a
24 computational hydrologist. I work on the groundwater
25 flow problems at WIPP.

1 Rather than actually commenting on the
2 science that's gone into WIPP, I'll just mention that
3 after ten years of working on the project, this year
4 I've decided to move my family to Carlsbad. And I
5 think the WIPP is safe, and I encourage the EPA to go
6 forward with the rulemaking.

7 Thank you.

8 MR. WILSON: I have an E. Shirley.

9 (Note: No response.)

10 One more. Is Joe Archuleta here?

11 How about Ross Kirkes?

12 Sorry. We are fairly ahead of schedule, so I
13 think some people are probably planning to come later.

14 We will do this one and then take a 15-minute
15 break. Thank you.

16 MR. KIRKES: My name is Ross Kirkes,
17 K-i-r-k-e-s. I'm from Carlsbad; I'm a lifelong
18 resident of Carlsbad. And I appreciate EPA's openness
19 to public input, and I'd like to take this opportunity
20 to discuss air drilling and its relationship to the
21 WIPP project.

22 Fluid or mud drilling is by far the most
23 common drilling method use at the Delaware Basin. Air
24 drilling technology has been around for more than 25
25 years and it offers economic benefits over fluid

1 drilling in certain site-specific -- when site-specific
2 characteristics are met.

3 The initial capital needed for air drilling
4 far exceeds that of fluid drilling due to the
5 additional expenses of air compressors and equipment,
6 but because of the faster penetration rates offered by
7 air drilling it results in less rig time and therefore
8 lower drilling costs. However, if the driller
9 anticipates in the interim any interruption in the air
10 drilling process, you would have to convert back to
11 fluid drilling, and, in doing so, you would diminish
12 the economic advantages that air drilling offers to
13 begin with. So you would probably be better off to
14 start with fluid drilling and stay with it.

15 In order to find out what's going on in this
16 area around the WIPP site, I personally conducted a
17 survey of over 30 drillers in the area. Out of these
18 30, 15 responded. In the 15 that did not respond,
19 several have gone out of business over the last ten
20 years, and several of the others have been absorbed or
21 bought out by the active companies.

22 Thirteen out of those 15 responding claim
23 that they do possess and understand air drilling
24 technologies, but they all agreed they would not use
25 air drilling near WIPP. They cite the reasons such as

1 overlying water-bearing zones in the Rustler and the
2 potential or threat of pressurized brine between the
3 WIPP and the Castile. And probably the most important
4 reason they state they don't use air drilling around
5 WIPP is the primary reason for using air is that it's
6 fast. In the formations near the WIPP they can drill
7 quite fast with conventional methods, with fluid, so
8 they don't have to incur those high costs of air
9 drilling, they simply use fluid and make the hole
10 quickly.

11 That is what they do.

12 In addition to this survey that I conducted
13 with the drillers, I also performed a records search at
14 the New Mexico Oil Concentration Division. And we
15 looked at every Well file within the nine townships
16 around the WIPP site. That included 767 well files,
17 324 square miles around the WIPP site.

18 There was absolutely no evidence whatsoever
19 of air drilling. None.

20 So, with that, we expanded the scope even
21 further. We looked at 1400 well files, and we did find
22 two holes that were drilled, at least in part, with
23 air. These two holes I presume are the two Jim Amos
24 mentioned in his memo that is attached to the Attorney
25 General's analysis of air drilling. These were drilled

1 in 1979. And in that 16-mile radius of the WIPP, there
2 are 1401 wells and only two drilled with air.
3 Apparently they weren't very successful, or else the
4 industry would continue that practice.

5 In conclusion, I would like to say air
6 drilling is not conducted near the WIPP site. Two out
7 of 1400 certainly does not represent a current or a
8 well-used practice. The drillers use air drilling where
9 it's applicable, but only after they consider certain
10 site-specific characteristics such as dry formations
11 and areas in which they are certain there's no
12 opportunity to encounter water-bearing formations.

13 That is not the case near WIPP.

14 Thank you.

15 MR. WILSON: I just had one quick question.

16 Do you know if there's anything happening
17 with the technology of air drilling that would make
18 those facts change in the future, that would make it
19 more economical?

20 MR. KIRKES: Certain small quantities of
21 water could be dealt with, but it's not the technology,
22 it's the economics, and oil companies operate strictly
23 based on that.

24 Stiff foams and certain coagulants may be
25 used to carry the cuttings to the surface using air,

1 but, again, you are talking about lots of expense, and
2 near the WIPP the holes drill quite easily and quite
3 straight to begin with using fluid. Water is cheap.

4 MR. WEINSTOCK: You have obviously done a lot
5 of work, and we appreciate your testimony, but if you
6 have any kind of written report, I just --

7 MR. KIRKES: Absolutely.

8 MR. WEINSTOCK: If you can submit one either
9 now or sometime during --

10 MR. KIRKES: I will. I will provide it
11 tomorrow.

12 MR. WEINSTOCK: Okay. Thank you.

13 MR. KIRKES: Thank you.

14 MR. WILSON: With that we will take about a
15 15-minute break. It's 25 after 7:00 on my watch, so
16 about 20 of 8:00.

17 (Note: A recess was taken at 7:25 and
18 proceedings resumed at 7:45 p.m.)

19 MR. WILSON: Okay. If we can get everybody
20 to sit down.

21 Is Paul Sanchez here?

22 MR. SANCHEZ: Yeah, I'm here.

23 What I'd like to do, I just found out you
24 called me, because I was ahead of the schedule. Just
25 to make sure I don't break up any continuity, I was

1 talking to Kathy, and Frank Hansen, and I was wondering
2 if they could go first and I could go after those two.

3 MR. WILSON: That is fine.

4 All right. We will jump -- Kathy Knowles. Is
5 that who you were referring to?

6 MR. SANCHEZ: Yeah.

7 MS. KNOWLES: Yes. That's me.

8 I have a written statement that I am just
9 going to read from. I assume you want it when I'm
10 done.

11 MR. WILSON: I think if you could give it to
12 the reporter, that would help a lot.

13 MS. KNOWLES: This goes down?

14 MR. WILSON: Look like it.

15 MS. KNOWLES: That works. Thank you.

16 Where's the light so I know when...

17 MR. WILSON: Right here.

18 MS. KNOWLES: My name is Kathy Knowles, and
19 this is my personal statement regarding the WIPP.

20 I am a senior member of the technical staff
21 at Sandia National Laboratories. I came to Sandia in
22 1993 from the University of California in Santa
23 Barbara, and I came specifically to work on the WIPP
24 project. One of the compelling reasons that I accepted
25 a position on this project was the logo that resides

1 on the bottom of every Sandia document. It says:

2 Exceptional Service in the National Interest.

3 Disposal of hazardous waste is a national
4 problem. Others have spoken more eloquently than I on
5 this very topic.

6 Within every person's lifetime, there are
7 relatively few opportunities to work on a program that
8 is of significant importance to the general population.
9 There's also few opportunities in which it is assured
10 that the work will be conducted according to the
11 highest scientific and ethical standards.

12 Because WIPP encompassed both these ideals, a
13 program which could benefit society at large and a
14 commitment that studies supporting this program would
15 be of the highest quality, I welcomed the opportunity
16 to participate in the evaluation of WIPP for permanent
17 disposal of transuranic waste.

18 My technical background is in mechanical
19 engineering, in which I hold a Bachelor of Science, a
20 Master of Science, and a Ph.D. I specialize in the
21 design and implementation of computer simulations of
22 transport processes, which is just a fancy way of
23 saying I build computer models and codes to predict
24 where contaminants will end up. I have also planned,
25 supervised, and conducted laboratory field experiments

1 to gather data used in these simulations. Over the
2 past ten years I have worked on engineering issues
3 relevant to heat transfer, offshore oil exploration,
4 contaminant transport in lakes and rivers, sediment
5 diffusion in estuaries, and, most recently, on several
6 transport issues included in the Compliance
7 Certification Application for WIPP.

8 Having developed computer models and codes
9 for a large spectrum of physical settings, I believe I
10 can offer an informed perspective on the validity of
11 the simulations of long-term WIPP performance.

12 In December of 1996 I was asked to work on
13 one of the release scenarios for the WIPP known as
14 spallings. Spallings is defined within the WIPP as one
15 of three processes leading to the release of solid
16 material to the surface during drilling of a
17 hypothetical exploration borehole into the disposal
18 areas. In the interest of time, I won't be giving any
19 other information on the technical details, but will
20 instead talk in general terms about the scientific
21 studies that were conducted to demonstrate that
22 releases of solid material due to spallings will, in
23 fact, not pose a threat to public safety.

24 At the request of DOE, staff from Sandia
25 subjected the spallings process to complete and

1 vigorous evaluation during the months between December
2 1996 and April, 1997. This evaluation included
3 assessment of the assumptions included in the CCA's
4 design and implementation of experiments on waste forms
5 and properties, consultation with oil industry
6 professionals on gas blow-out processes, and
7 development of computer codes and models to predict the
8 outcome should an inadvertent intrusion occur. We
9 spent more than 10,000 hours of time on this program,
10 and demonstrated that releases due to spillings would,
11 in fact, be quite small.

12 I consider my contribution to this program to
13 be one of the highlights of my professional career.

14 Computer simulations of spillings releases
15 were only one part of this large effort. As I said
16 before, the calculated releases during the spillings
17 events were shown to be very small. There are a
18 number of processes that will act to limit releases
19 which were not included in the calculations.
20 Principal among these are controls imposed by the
21 drilling operator, and the inherently massive nature
22 of the waste itself. As a builder of models, I can
23 assure you that these are very difficult processes to
24 capture in a computer code, and that is the only reason
25 they are not included in the models used to date. As an

1 engineer, I can also assure you that these processes
2 will mitigate releases to the surface.

3 It is the task of an informed researcher to
4 merge predictions of simplified processes that we can
5 model with the more complex world in which we live.
6 The notion of an uncontrolled gas blowout is not
7 consistent with practice in the Delaware Basin.
8 Standard --

9 Standards -- Am I almost out of time?

10 MR. WILSON: You have --

11 MS. KNOWLES: Okay. Then I'm going to skip a
12 paragraph.

13 The evidence that WIPP is a safe site for the
14 permanent disposal of transuranic waste is
15 overwhelming. To find otherwise is to acquiesce to
16 those who base their opposition to WIPP on irrational
17 fears and similar motives.

18 In the end, it is my hope that reason will
19 prevail and that the exceptional work performed on the
20 WIPP project comes to the only reasonable conclusion,
21 and that is, to open WIPP.

22 MR. WILSON: Thanks. If you would leave this
23 on the table, we would make sure --

24 MS. KNOWLES: Okay.

25 MR. WILSON: Thanks very much.

1 Frank Hansen. Okay.

2 MR. HANSEN: This is a personal statement,
3 although I work for Sandia National Laboratories. I am
4 a member -- I'm a principal member of their technical
5 staff. I have a B.S./M. S. in civil engineering and a
6 PhD. in geology and tectonophysics, and I've been a
7 professional engineer since 1978. I have over 20 years
8 exploring natural and experimental deformation of
9 engineering and natural materials. in civil
10 engineering, I emphasize structures, mechanics and
11 materials. My geotechnical applications have ranged
12 from the first order of structures of the earth to the
13 micromechanical processes.

14 I've been intimately involved in the WIPP
15 project since its inception, working since 1974 on the
16 thermomechanical testing of salt from the exploratory
17 drillholes AEC 7 and 8 and ERDA 9. My research and
18 development specific to the WIPP is well documented in
19 something like 40 plus technical publications that have
20 something to do with the relationship and the
21 experimental deformation of salt. I believe I have
22 personally tested and examined more salt than anyone in
23 the world.

24 Now, based on this breadth of personal
25 experience and an abiding appreciation for the problem

1 at hand, I testify here that I feel strongly that the
2 WIPP provides a sound, robust repository for the
3 disposal of the nation's transuranic waste.

4 Now, within this protocol of public comment
5 on the WIPP, I would like to focus on one topic
6 particularly germane to the inadvertent drilling into
7 the site that received some spectacular press lately.

8 To review, it has been postulated that at
9 some future date there exists a remote possibility that
10 a drilling operation may penetrate the site. If
11 several other low probability assumptions are invoked,
12 it could be calculated that degraded waste material
13 spalls into the drill string and out the hole to the
14 surface -- at least theoretically.

15 When taken all together, these contributing
16 assumptions have led to the largest theoretical
17 releases between one and two orders of magnitude below
18 the EPA limit.

19 My position regarding impact of human
20 drilling is this: It will be impossible to extract any
21 appreciable material from the repository by way of a
22 drilling intrusion. This conclusion is based on a
23 large body of recent work, much of which is documented
24 in a reference cited as Hansen, et al. 1997. It's
25 based on the consideration of the state of the waste

1 over time has led to the unequivocal conclusion that
2 crushed, compacted, cemented, partially degraded
3 55-gallon drums are not primary candidates for
4 extraction through a borehole.

5 As these fourr artist's renderings of the
6 underground show, at times zero you have this excavated
7 geometry with that type of material packing in the
8 underground.

9 The next slide shows -- these are based on
10 rigorous scale model calculations and field evidence.

11 In 12 years time the salt compacts the waste.

12 Next one.

13 In 50 years time the original repository room
14 is one half its original height. In this time there's
15 only minimal degradation of the material.

16 These are facts.

17 And the last, the last slide shows at 1,000
18 years plus. There is some conjecture at what it might
19 look like, but I would assert that long before any
20 appreciable degradation occurs, the waste will be
21 reduced to less than half its original height. And, as
22 noted by the NRC report, in a nearly dry repository,
23 degradation is minimal.

24 And this fact is borne out by natural analogs
25 from ancient salt mines where metal, ceramics, and

1 organic materials have been encapsulated in salt for
2 millenia.

3 In addition, the blocky, heterogeneous
4 architecture of compacted waste inventory is not
5 conducive to gas-driven transport under any
6 circumstances.

7 As a concluding remark, I would like to say I
8 appreciate the opportunity to make a personal public
9 comment on this important issue at this historic time.
10 The National Academy of Sciences had the story correct
11 back in 1957 when they identified the storage in salt
12 as a scientifically sound solution to close the
13 nuclear cycle. Opening WIPP is an overdue first step
14 towards cleaning up the nuclear legacy.

15 MR. WILSON: Thank you very much for your
16 testimony.

17 Next is Mary Ellen Klaus.

18 MR. SANCHEZ: I'll go next.

19 MR. WILSON: I'm sorry. I was just going
20 through the list.

21 MR. SANCHEZ: Okay. My name is Paul
22 Sanchez. I am speaking as a private individual who
23 resides here in Carlsbad raising two small children,
24 and have a grandchild every year or two, as well.

25 I have a Bachelor of Science degree in

1 geology from Humbolt State University in Northern
2 California, and a Master's degree in geology from
3 Northern Arizona University. These are two very
4 environmentally conscious schools -- I would say
5 extremist in some cases -- and I've come to be very
6 environmentally conscious myself on all the projects I
7 worked on. And I worked in California on assessing the
8 seismic safety of hazardous waste facilities. When I
9 moved out here, I again took that stance,
10 and I still continue to do so working for the
11 scientific advisor to the Department of Energy. I work
12 for Sandia National Labs.

13 It's been my observation over the years that
14 despite -- notwithstanding the credibility of our P. A.
15 that there's a whole lot of intuitive reasons for
16 believing the viability of the WIPP project. It's also
17 been my observation that a lot of rational and
18 non-biased scientists, geologists, and related
19 disciplines have the same opinion, through informal
20 discussions with the New Mexico Geological Society, and
21 friends and associates that still work in the field
22 that I keep in contact with.

23 Anyway, it makes me very proud to observe
24 after reading the EPA proposed ruling that you guys
25 gave the WIPP project a fair assessment, and it appears

1 ruling in favor of the project, a lot of issues that
2 were outstanding, you guys ruled in favor of.

3 For the route that follows, I'm going to
4 quote Mark Twain. He said: Why shouldn't the truth be
5 more strange than fiction, because fiction, after all,
6 has to make sense.

7 Well, I think some of the political agendas
8 that will come to the surface during the comment period
9 will be speculative and perhaps nonsensical, so, as a
10 citizen and professional, I worry about how these
11 outstanding issues will be handled, and I hope the EPA
12 will again give the WIPP project a fair shake.

13 MR. WILSON: Okay. Thank you for coming.

14 There's one other person we skipped over
15 earlier.

16 Joe Archuleta. Is he here?

17 Hi.

18 MR. ARCHULETA: My name is Joe Archuleta. I
19 have a Bachelor's degree in civil technology from New
20 Mexico State University. My family and I live in
21 Carlsbad, and I work for Sandia National Laboratories.
22 I have been working as a quality assurance engineer
23 since I became assigned to the WIPP project in 1994.
24 I am currently the assessment task leader, audits and
25 surveillance, supporting Sandia/WIPP-related work. I

1 am here as an individual to let the EPA and the public
2 know about our assessment program.

3 The Sandia/WIPP assessment program is based
4 on nuclear quality assurance requirements. We have
5 been very active in support of experimental activities
6 which have been identified by the DOE Carlsbad Area
7 Office as critical to the WIPP project. In fiscal year
8 1997 alone we performed 12 audits and 25 surveillances
9 of our contractors and of Sandia work. Our lead
10 auditors are trained to manage their audit teams so
11 that each auditor reviews assigned work activities to
12 assure that procedures, calibration test plans,
13 scientific notebooks, and software meet NQA standards.

14 As assessment task leader, it's my
15 responsibility to ensure that we use our limited
16 resources and funding as efficiently as possible, and
17 because of our assessment program we have a high level
18 of confidence that we are doing the most scientifically
19 defensible work possible in support of the WIPP
20 project.

21 Thank you.

22 MR. WILSON: Thank you very much for that
23 testimony, and thanks for coming.

24 Now we will try Mary Ellen Klaus. Is she here?

25 MS. KLAUS: Hello. My name is Mary Ellen

1 Klaus. I'm the Chairman of the Eddy County Republican
2 Party.

3 First I would like to sincerely thank you
4 all for choosing Carlsbad to have these hearings today.
5 As I am sure you are well aware, the opening of the
6 WIPP is a very important topic to the residents of
7 Southeast New Mexico.

8 You may be wondering why an officer of a
9 political party would be interested in testifying
10 today. You may be asking, "Isn't opening WIPP a
11 technical and scientific issue? What possible reason
12 could there be for a party official to want to speak
13 today?"

14 If the decision to open the WIPP were based
15 simply on good science, it would have been open years
16 ago, in my opinion. A large portion of our nation's
17 transuranic waste would safely be now underground,
18 rather than spread across the nation in temporary
19 sites.

20 I wish it weren't necessary for political
21 activists such as myself to comment on what should be a
22 straightforward scientific decision; however, the
23 actions of WIPP's opponents have made the opening of
24 the WIPP a political rather than a scientific issue, to
25 a large extent.

1 For instance, our New Mexico Attorney General
2 has chosen, in my opinion much to the detriment of the
3 residents of New Mexico and our nation, to take action
4 to delay the WIPP's opening. Never mind that every
5 independent scientific review has declared it safe.
6 Never mind that it is vitally important to our nation.
7 These facts don't seem to matter. Some feel that by
8 twisting the truth they can incite many citizens to
9 oppose the WIPP, and some apparently feel that will
10 increase their political careers.

11 Opening the WIPP should be based on science,
12 not politics.

13 In my limited time, I would like to discuss
14 how WIPP contributes to our national prosperity and
15 security, a topic on which I know the EPA is vitally
16 interested.

17 For over 50 years America's security has been
18 partially dependent on a strong nuclear deterrent. In
19 the past, because of a potential nuclear threat posed
20 by the Soviet Union, the United States deployed a large
21 number of nuclear weapons. Not only did this nuclear
22 umbrella protect us from overt aggression, but, in my
23 opinion, it also discouraged more covert aggression. I
24 feel to a large measure it has guaranteed peace in
25 Europe, Japan, and other region of the world. Under

1 the masterful leadership of Presidents Reagan and Bush,
2 our nation stood fast. We saw the collapse of the
3 former Soviet Union and the end of the Cold War.

4 Due to the changing international climate,
5 the United States now is reducing its stockpile of
6 nuclear weapons. It is also in the process of closing
7 up and cleaning up many of its nuclear sites across the
8 nation.

9 That is where WIPP comes in.

10 Many of these sites have been storing
11 transuranic waste, and TRU waste is a well-defined
12 by-product of nuclear weapons and manufacturing. I
13 wouldn't even try to attempt to talk about that at this
14 time, but, as a step in cleaning up and closing these
15 sites, TRU waste should immediately be sent to a final
16 resting place: WIPP.

17 As long as the WIPP's opening is delayed the
18 clean-up activities at these weapons sites will be
19 frustrated and likewise delayed. Without a final
20 resting place, TRU waste will continue to accumulate in
21 less protected, temporary places.

22 I understand the EPA is vitally interested in
23 cleaning up these sites. Without the clean-up, these
24 sites pose a potential long-term environmental problem.

25 It is fortunate for the WIPP that the federal

1 agency most concerned with environmental protection is
2 deciding WIPP's fate. It would be a shame if the EPA
3 delayed WIPP yet again. I know that won't happen,
4 because I feel the EPA clearly understands how
5 important WIPP is to the environment.

6 I must speak from a layman's point of view.
7 As a layman, I put my personal trust for our safety now
8 and for the future in the hands of the highly
9 qualified, dedicated scientists and engineers who
10 helped develop and build the WIPP. They have worked
11 diligently to plan and implement safe procedures for
12 transporting the TRU waste across the country and into
13 the Carlsbad area, and for handling and storing TRU
14 waste at the WIPP site.

15 I ask one thing of the EPA: Please review
16 all the evidence. Make your decision based on science,
17 not politics. If you do so, I am confident you will
18 conclude that WIPP is safe, vitally needed, and should
19 be opened now.

20 Thank you.

21 MR. WILSON: Thank you very much for coming, and
22 for that testimony.

23 We have a couple of other people who signed
24 in here.

25 Chuck Williams. Is he here?

1 (Note: No response.)

2 MR. WILSON: Okay. And an E. Shirley. I
3 think it's E. Shirley.

4 (Note: No response.)

5 This is the list of -- We are going to double
6 check. That's the list of people we had. Is there anybody
7 else here who wanted to make a statement tonight that
8 hasn't had a chance?

9 For your information, we are here tomorrow
10 starting at 9:00 o'clock in the morning for most of the
11 day. Then we will be in Albuquerque on Wednesday
12 afternoon and evening and Thursday morning, and then in
13 Santa Fe Thursday afternoon and evening, and most of
14 Friday. So we will be spending all this week here in
15 New Mexico listening to testimony about this issue.

16 If any of you have friends or colleagues who
17 are interested in coming tomorrow, tell them we will be
18 here starting at 9:00 through most of the day, and if
19 they let us know, we will be able to fit them in
20 tomorrow.

21 Let's double -- hang on a second before
22 closing to see if any -- We did have a couple of
23 people who signed up who may have had to leave.

24 Julie?

25 Okay. Unless there's somebody else who wants

1 to comment, we'll close the hearing for tonight and
2 start up again tomorrow morning at 9:00.

3 Thank you all for taking the time to come
4 out tonight. We appreciate it.

5 (Note: Proceedings adjourned at 8:20 p.m.)

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